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Teachers' perceptions of school connectedness and risk-taking in adolescence

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Abstract

School connectedness has been shown to be an important protective factor in adolescent development, which is associated with reduced risk-taking behaviour. Interventions to increase students' connectedness to school commonly incorporate aspects of teacher training. To date, however, research on connectedness has largely been based on student survey data, with no reported research addressing teachers' perceptions of students' connectedness and its association with student behavior. This research attempted to address this gap in the literature through in depth interviews with 14 school teachers and staff from two Australian high schools. Findings showed that teachers perceived students' connectedness to be important in regards to reducing problem behavior, and discussed aspects of connectedness, including fairness and discipline, feeling valued, belonging and having teacher support, and being successfully engaged in school, as being particularly important. This research enables the development of school-based intervention programs that are based on both student and teacher-focused research.

Key words: teachers; school connectedness; risk-taking; injury; adolescents

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Risk-taking behavior, including violence and transport-related risks, is the primary cause of fatal and hospitalized injury among adolescents. As one study has shown, participation in risk-taking and delinquent behaviors corresponds to a five-fold increase in experience of medically treated injuries (Buckley, Chapman and Sheehan, 2012). Transport risks account for the majority of fatal injuries, and globally, are the leading cause of death among young people aged 15-19 years (World Health Organization 2008). Among young people in Australia, transport-related injuries accounted for 44% of all injury deaths in 2005 (Australian Institute of Health and Welfare 2008). Violent behavior is also prevalent, with results from the Youth Risk Behavior Survey (YRBS, Centers for Disease Control and Prevention, CDC 2010) showing that 32% of grade 9 to 12 students report getting into a fight in the previous twelve months, with 4% of these treated medically (CDC 2010). Many of the risk-taking behaviors among adolescents occur in the context of alcohol use. According to an Australian survey, eight out of ten high school students report having used alcohol (Healey 2002).

School-based approaches to the prevention of adolescent risk-taking have primarily been focused on individual attitudes and beliefs. Increasingly, however, researchers and practitioners are taking into account the importance of the social context in supporting adolescent behavior change, and incorporating wider school-level approaches in the development of prevention programs. Research has suggested that risk-taking prevention programs should focus on changing institutions that are important in adolescents' lives as well as targeting attitudes and behaviors (e.g., Dryfoos 1990). One study examining children's conceptualizations of their school showed that students interpret their school as a community, and talk about belonging and membership as important (Pooley et al. 2008). Pooley and colleagues (2008) discussed these results as signifying the importance of wellness

programming functioning at collective and interpersonal levels as well as the individual level. This research explores this issue from the point of view of teachers and school staff.

Teachers and other school staff are in a unique and important position in regards to prevention programming as they spend a large amount of time with adolescents, and can have a powerful impact on their behavior and outcomes. For example, school connectedness, which can be defined as 'the extent to which students feel personally accepted, respected, included and supported by others in the school social environment' (Goodenow 1993, 80) has been identified as a critical protective factor in adolescent development. Connected students have positive peer relationships; although, as Goodenow (1993) found, teacher support was the largest predictor of students' sense of school connectedness. Engagement in and connectedness to school, including aspects of supportive teacher relationships and fair treatment, has been shown to be negatively predictive of school dropout (Archambault et al. 2009), and positively associated with academic motivation (Goodenow 1993; Wentzel, 1998). Positive teacher-student relationships and a sense of belonging or connectedness to the school community have also been shown to be negatively associated with students' risk-taking behavior, including violence, alcohol use and transport risks (e.g. Resnick et al. 1993; Chapman et al. 2011).

The potential exists for school-based prevention programs to incorporate social and contextual protection in the form of students' increased connectedness to school. Strategies to increase school connectedness may be implemented as part of wider risk and injury prevention programs targeting individual adolescent attitudes and behaviors. As teachers and other school staff may be considered key facilitators of social and contextual change within the school environment, training or professional development of teachers in methods to increase students' connectedness to school may be beneficial. Prior to developing professional development programs and associated connectedness strategies, however, it is

important to understand teachers' perspectives regarding connectedness and its importance in the school context. The research to date on school connectedness has focused largely on students' perspectives, with the majority of studies involving quantitative surveys with adolescents. One survey-based study conducted with teacher participants in the United States focused on the strategies that they use to connect students to school, such as acting as positive role models and calling students by their first names (Vidourek et al. 2011). Consultation with teachers regarding their overall perceptions of school connectedness and its relationship with student risk behavior has not been reported; however it is an important step to ensure program development aligns with their priorities and incorporates their views.

The aim of the current research was to develop our understanding of teachers' perceptions of school connectedness and its influence on students' risk-taking behavior. The results of this research will fill a gap in the literature on connectedness that has to date focused largely on students' experiences, and will enable the future development of risk-taking and injury prevention programs that are supported by teacher-focused research.

School connectedness

The literature relating to school connectedness arises from a variety of disciplines and encompasses a number of related terms and definitions. The term 'school connectedness' was first used in relation to the National Longitudinal Study of Adolescent Health, a US study which was designed to provide a comprehensive understanding of factors influencing adolescent health and health behaviors (Blum and Rinehart 1997). In the National Longitudinal Study of Adolescent Health, connectedness was examined via a scale tapping into students' sense of safety, rule fairness, teacher support and belonging.

Concepts relating to school connectedness have also been utilized in educational literature to predict student outcomes including school dropout and motivation or achievement. The term 'school engagement' has been used in a number of studies, following

a model by Finn (1989), who suggested that a lack of school engagement is part of the process of school withdrawal that often leads to school dropout. In other studies of student motivation and achievement, school bonding and related measures are also used as predictor variables. One of the most widely used measures of school belonging, the Psychological Sense of School Membership Scale (PSSM) was developed from educational literature exploring student motivation, engagement and achievement (Goodenow 1993). Goodenow (1993) found that school belonging is significantly and positively related to academic motivation.

Although recognized by varied terminology across several disciplines and assessed using different measurement tools, a number of researchers have attempted to summarize the literature and have identified several common components that underlie students' connectedness to school (e.g. Jimerson, Campos and Greif 2003; Libbey 2004; Maddox and Prinz 2003; O'Farrell and Morrison 2003). These include affective, behavioral and cognitive connectedness. Measures of school connectedness commonly incorporate items corresponding to each of these elements. For example, affective connectedness refers to students' feelings about their school and the people within it, and includes, for example, impressions of belonging in school and positive peer relationships. Behavioral connectedness meanwhile refers to students' actions or performance in school, such as their level of academic engagement and extracurricular involvement. Finally, cognitive connectedness is a student's perceptions and beliefs regarding their school and people within it. This component includes factors such as perceptions of teacher support and having a sense of rule fairness and perception of safety.

Reflecting the multidisciplinary origins of school connectedness, studies have been conducted that show associations between school connectedness and a number of adolescent outcomes, including academic motivation and achievement (e.g. Goodenow 1993; Wentzel,

1998), emotional and physical health (e.g. Shochet et al. 2006; McLellan et al. 1999), and risk-taking behaviors including alcohol and substance use, and delinquent and violent behaviors (e.g. Resnick et al. 1993; Chapman, Buckley and Sheehan 2011).

School connectedness and risk-taking behavior

Research on the association between connectedness and risk-taking behavior has explored delinquency and violent behavior, drug and alcohol use and other health risk behaviors including sexual activity. A large body of research exists suggesting a negative correlation between delinquency and violence and school connectedness, and related constructs. For example, research has shown that increased levels of school connectedness are related to delayed initiation of substance use and violent behavior (Dornbusch et al. 2001), reduced absenteeism and delinquency (Resnick et al. 1993), decreased health risk behaviors including alcohol and cigarette use (McLellan et al. 1999), and reduced weapon carrying (Battistich and Hom 1997) and sexual risk behaviors and gang membership (Voisin et al. 2005).

Along with established links between school connectedness and adolescent alcohol use, violence and delinquency, research has also shown that students' connectedness to school is negatively associated with transport related risk-taking behaviour. This includes motor vehicle risks, such as riding with dangerous and drink drivers and underage driving; as well as associated transport injuries (Chapman, Buckley and Sheehan 2011). This study was particularly important in that it showed that school connectedness is an important protective factor for risk behaviors that extend beyond the school setting.

A number of theories have been proposed to explain the relationship between school connectedness and adolescent risk-taking behavior. Theories are of particular value in aiding intervention design and explaining behavior change following interventions (Glanz, Rimer and Lewis, 2002). One theory that has commonly been used as the basis for program design

is Social Control theory (Hirschi 1969), which states that bonds to people or institutions act as inhibitors to risk-taking behavior through four primary mechanisms. Firstly and using the school as an example, greater attachment to school and teachers leads to a desire for approval from those within the school. Secondly, increased commitment to school manifests in students feeling as if they would have too much to lose by breaking school rules. Thirdly, greater involvement in school, as represented by participation in school and extracurricular activities, leads to less time for participation in risk-taking behaviors. Lastly, greater belief in the school and commitment to its values, norms and rules leads to greater respect for and obedience in regards to these rules and norms (Hirschi 1969).

Social Control theory has been re-conceptualised and extended since its introduction. It has also been integrated with other theories, including Self Control theory (Gottfredson and Hirschi 1990), which states that poor school bonding does not directly cause delinquency, but is rather an outcome of low self control. Additionally, the Social Development Model (Catalano and Hawkins 1996) extends Social Control theory by including factors necessary for the establishment of social bonds, including opportunities for involvement in the school context, skills for involvement, and reinforcement of involvement at school.

School connectedness programs

Despite the lack of research on teachers' understanding of connectedness, interventions to increase school connectedness commonly incorporate teacher training or Professional Development (PD). As these programs target changes within the social environment of the school, teachers are acknowledged as key facilitators of such change and are therefore supported in the development and identification of strategies that encourage students' connectedness. One such program is the Resourceful Adolescent Program for Teachers (RAP-T; Shochet and Wurfl 2006). The RAP-T program involves a series of three, three-hour PD sessions for school teachers, weekly newsletters and three refresher sessions,

designed to increase teachers' understanding of the importance of school connectedness and to develop strategies to enhance students' connectedness. Other programs, including the Seattle Social Development Project (Hawkins et al. 2001) and the Gatehouse Project (Patton et al. 2000), incorporate teacher training in classroom management and methods of instruction and student interaction that encourage connectedness and engagement, while also focusing on other aspects of the school environment including curriculum and parental involvement. While evaluations of the Seattle Social Development Project and the Gatehouse Project have shown some success in increasing connectedness to school (e.g., Hawkins, Catalano, Kosterman et al., 1999) and reducing risk-taking behaviors such as alcohol use (e.g. Bond, Patton, Glover et al., 2004), these evaluations have not investigated the impact of specific components, such as teacher PD, but have rather examined the impact of the multi-component program as a whole.

Research has shown that school connectedness is an important protective factor in adolescence, and that school-based risk and injury prevention programs may incorporate social protection strategies by focusing on this factor. Teacher professional development and training is a method used in school connectedness programs. Potential participants' views, however, have frequently not been incorporated into the program development process (Hesketh et al. 2005). Engaging teachers and school staff in conversations about their perspectives of school connectedness and how it relates to student behavior is an important process that to date has been overlooked. Given the lack of research on teachers' perceptions, a qualitative approach will provide a foundation for future research and program design. The aim of this research is to therefore conduct an exploratory, qualitative study of teachers' perceptions of students' connectedness and risk behavior.

Method

Participants

Participants were recruited from two conveniently sampled public high schools in outer suburban areas of southeast Queensland, Australia. The Index of Relative Socio-Economic Advantage/ Disadvantage was obtained for each of the two schools. The Index is constructed from attributes of the population in the area, such as educational attainment, income, employment and occupation, and ranges from 1-10. One of the schools is located in a somewhat advantaged area (Index score of 8) and the other school is located in a disadvantaged area (Index score of 1) (Australian Bureau of Statistics, 2005).

Teachers from the Health and Physical Education departments as well as school-based Guidance Officers and school-based Youth Health Nurses were invited to participate in in-depth interviews. School-based risk prevention programs (e.g. for alcohol, drug use and violence) are commonly delivered within a school's Health curriculum. Additionally, Guidance Officers and Nurses are frequently responsible for managing risk-taking behavior issues within the school context. Health teachers, Guidance officers and nurses were therefore selected as being most likely to deliver health behavior change programs within their schools, and as likely to have in-depth understanding of adolescent risk-taking behavior. The project did not involve participation in a school prevention program, but rather requested feedback from staff members about the perception of adolescent risk-taking and related school factors.

Fourteen school staff participated in the interviews. Participants included twelve Health and Physical Education teachers, one school-based Guidance Officer, and one school-based Youth Health Nurse. Of these participants, eight were female and six were male. No other identifying information was collected from school staff.

Interviews were chosen over focus groups in order to ensure participants' own unbiased opinions regarding the topic as well as to engage each participant more fully, allowing for rich descriptions to be gained from each of their perspectives. As this is an initial

exploratory study of teachers' views of school connectedness, in depth interviews were a preferred means of gaining detailed insight into teachers' conceptualizations of the concept. Data analysis was conducted in two rounds. The second round of analysis indicated that themes were recurring and no new themes were being identified, suggesting that saturation in the data had been reached.

Facilitators

The interview facilitators were one male and five female researchers, all with graduate degrees in psychology. The facilitators did not know the teachers being interviewed. All facilitators met prior to the interviews and were shown the interview protocol, were able to discuss the questions, and agreed on procedures. All facilitators had previous experience in qualitative research. All in-depth interviews were conducted by just one facilitator with a single participant, and each facilitator conducted at least one, and up to four, interviews.

Materials

A semi-structured interview schedule was used, incorporating open-ended questions. Questions dealt with participants' perceptions of student-teacher relationships and how these connections may influence student behavior. Introductory questions were therefore: "How would you, or how do you think other teachers in general would feel about providing help or advice to young people if they talked to you about risk-taking behavior?", and "What, if anything, can teachers do to impact on students' risk-taking behavior?" Following from these opening questions, several probing questions further explored participants' perceptions of connectedness and its association with risk-taking behavior. These questions included, "In what way might the school environment influence students' risk-taking?", "How do teachers engage students at school and how does this impact on behavior?", and "What do you find works in terms of relationships with students in preventing risk-taking behavior?" Importantly, these specific interview prompts were tailored to teachers' responses to the

earlier questions. As such, probing questions referring to the link between connectedness and risk-taking were asked only following teachers' identification of this link. Initial meetings held with the interview facilitators ensured understanding of the interview process and the appropriate use of specific probing questions within the semi-structured interview format.

Participants' understanding of risk-taking behavior was determined by the facilitators within the interviews. Participants were not asked about specific risk-taking behaviors, but rather risk-taking behaviors as a whole were described as being dangerous behaviors that may lead to injury. The term "school connectedness" was also not used within interviews, with facilitators instead using terms such as "relationships" and "engagement in school", in order to allow for unstructured responses free from any response biases. Facilitators used paraphrasing to ensure accurate understanding of responses, as well as probing questions such as "Can you tell me more about that?"

Procedure

Ethical approval was obtained from the university ethics committee, the Education Department, and school principals. The research was conducted as per the approved procedures. Prior to their participation, the school staff members were provided with an information sheet and were asked to sign an attached consent form. All invited teachers who were present on the days of data collection agreed to participate in the research. The hour-long in depth interviews were tape recorded with participants' permission.

Analysis

The data from the 14 interviews were transcribed verbatim by the first author. The first author undertook the transcription process in order to begin the process of thorough immersion in and understanding of the data. Transcripts were then analyzed using thematic analysis (Braun and Clarke 2006) in order to determine participants' perceptions of relationships with students' and impact on behavior.

As described by Braun and Clarke (2006), qualitative analytic methods can be discussed at a basic level as belonging to one of two groups – those that stem from a chosen theoretical position, and those that are essentially independent of theory. A number of theories, such as Hirschi's (1969) social control theory, have been proposed to explain the link between school connectedness and adolescent risk-taking behavior. This research was an exploratory study of teachers' perceptions of this link, however, and it was decided that theoretical constraints should not be placed on the analysis of teacher responses. Rather, the analysis allowed teachers' own opinions regarding this relationship to be expressed. Thematic analysis is a flexible qualitative analytic method, which can provide rich and complex descriptions of participants' own perceptions, independent of theory (Braun & Clarke, 2006).

In order to provide some structure to the analysis, however, the themes identified within the current data were organized according to a definition of school connectedness proposed by Jimerson and colleagues (2003). According to these authors, school connectedness is comprised of three underlying components: affective, behavioral and cognitive connectedness. Categorizing themes according to these elements provided a level of structure to the analysis while also enabling teachers' perceptions of the link between school connectedness and student behaviour to be described, independent of theory and as expressed by the participants themselves.

During analysis, all data were firstly read repeatedly by the first author for immersion, during which time no notes were taken. Following repeated readings, the coding process was conducted using an inductive approach to identify codes and themes progressively throughout analysis (Hsieh and Shannon 2005). The coding process involved examining and categorizing data based on words and phrases used across participants and throughout data items, and tagging and labelling data extracts. The labelled codes were then grouped according to the

common underlying theme that they expressed, and were examined in terms of their fit within Jimerson et al.'s (2003) definition of school connectedness.

The first author undertook the analysis. Aside from in situ facilitator checks of understanding through paraphrasing, member checking (i.e. discussion of chosen themes with participants to ensure accurate analysis) was not undertaken. To ensure reliability and validity of the coding process, however, and to allow for multiple viewpoints to form a complete understanding of the data, frequent consultations were held with the other authors. During these consultations, transcripts were re-read and themes agreed. This enabled ongoing reliability checking regarding coding of data and final identification of themes. Additionally, interpretations that needed further clarification were discussed during these sessions, providing a comprehensive and justified reflection of the data.

Results

Participants indicated that they perceive the way in which students' engage with school, the way students are treated in school, and their relationships with teachers, have an impact on their behavior. Analysis of responses showed that students' connectedness to school was described in terms of four themes, including 1) perceptions of fairness and discipline, 2) sense of value and teacher support, 3) feelings of belonging in school, and 4) experiences of successful engagement and involvement in school. These themes were all spoken of in some way as relating to students' risk behavior, with teachers' responses indicating that greater levels of fairness, of feeling valued, supported and belonging, as well as greater involvement and engagement in school and school activities, were associated with reduced student risk behavior. For example, one teacher stated that, "we put in the hard work; we don't have any behavior management problems" (Female). Importantly, all teachers provided responses that fit within these four themes, and all teachers expressed positive perceptions of the elements of connectedness and their impact on student behavior.

Each of the themes revealed within this data also fit within one or more of the primary elements of connectedness (affective, behavioral, and cognitive connectedness [Jimerson et al.'s, 2003]). The results are presented in turn according to each of the four themes, and will be discussed in terms of how these themes fit within the broader elements of connectedness.

Fairness and discipline (cognitive connectedness)

The theme of fairness and discipline fits within the broader element of cognitive connectedness, which incorporates students' perceptions and views regarding their school environment and the people within it. Students' sense of rule fairness and their perceptions of the disciplinary practices within the school are important elements of cognitive connectedness, and teachers saw these factors as being particularly important for students' behavioral outcomes. In particular, teachers' responses centred on the importance of their practicing consistent and confident discipline as a means of affecting student behavior and outcomes. Teachers' discussed the importance of remaining fair in disciplining their students, and of maintaining a relationship that does not alienate students. Through these actions, the teachers saw themselves as developing respectful relationships with students that engendered trust, while opening up a connection through which students felt comfortable in talking about issues such as risk behavior. Through the development of trusting relationships, teachers saw students as being able to discuss risk behavior with them, while also being aware that there were "consequences" for such actions.

As a teacher, you've got to be authoritative, but you've also got to be easy going; someone they can talk to. Sometimes you've got to sort of, let the kids sort of trust you and you be one of them, and you know, all that sort of stuff, and then they will give you a bit more trust and they'll start to talk to you about those sorts of things. (Male).

You need to know your stuff, what you're doing, you need to be confident. And you've got to also be a friend to them, as well as be authoritative. They've got to know that, yep, he's a cool teacher, but if you do something wrong ... there's consequences. (Male).

Participants also indicated that it was important to remain fair in their treatment of students, even when they had been involved in punishable behavior. Several teachers mentioned that, being in the position of responsibility, they need to maintain this when students are involved in negative behaviors, and develop strategies to get along with these students when such behavior occurs. They talked about themselves as, in some cases, potentially being behind the escalation of some negative classroom behaviors, and that it is important to develop strategies and methods to prevent problem behavior rather than resorting to punishment, which in some cases may not be effective.

And when you've got, well you've got two personalities that are similar they clash sometimes. And you being the oldest person, you know, you being the teacher, should realize that and sort of, I don't know, work out a way, a strategy to get around that with a student rather than try and hammer that shit in all the time, because they're doing, you know, they're being stupid or whatever. (Male).

Sometimes they can have bad days. You know, and when they're having a bad day...if you've got a good relationship with them, you don't push them on those days. You know, sometimes if you push a kid they'll go off. You know, and they'll get in a lot of trouble but when you sit back and think, well maybe I know what's going on at home, maybe it's something to do with that, I'll let it slide and I'll speak to them after they've calmed down a bit and go from there. (Male).

One teacher also mentioned that they would take the relationship so far as to not take formal disciplinary action if their student was involved in drug taking behavior at school. They felt that a caring relationship in which a student can trust a teacher was more important than punitive action in managing behavior. Additionally, this teacher indicated that they would make it clear to the student that while they are not happy with their behavior, they still like them as a person. The importance of creating positive, respectful relationships as a preventive rather than punitive measure was commonly expressed within this theme.

I wouldn't do anything formally [if a student were using drugs] but I would definitely try to keep the relationship the same with them as it always has been and let them know that I still like them, you

know, like it's their behavior that I'm not really keen on but it doesn't change the fact that I like them, sort of thing. (Female).

Finally within this theme, and also corresponding with participants' perceptions of themselves as being in the position of responsibility regarding student behavior, it was also mentioned that students respond well when teachers are fully engaged with them, and when teachers do not bring with them to school any negative influences external to the school environment.

Everyone's human. You have problems at home, and sometimes I think, teacher's are human, they bring in problems to school and like the student, we take it out on someone straight away... I run the football program here, so like I said...I'm involved with a lot of kids and I worry at home about what we're doing at footy, and thinking about things to do, but basically, other than that I don't. When I leave here of an afternoon, I care about the kids but I don't take it home. When I come to school, same thing, I don't bring what's happening at home to school. You know, and I think that's the sort of way you get through to the kids. (Male).

Feeling valued and teacher support (cognitive and affective connectedness)

The theme of students' feelings of value and perceptions of teacher support also fits partially within the broader element of cognitive connectedness, which incorporates students' opinions and perceptions of the school environment, including how they are treated within it by members of the school community. Additionally, it can also be considered as part of affective connectedness, which relates to students' feelings of worth and belonging within the school.

This theme reflects a prevailing opinion held by participants; that students involved in high risk behavior are those that lack supportive adult relationships, and that when students are made to feel valuable and supported, they are less likely to become involved in risks. Participants indicated that many at-risk students are those that do not have supportive adult relationships outside of the school, and that therefore the development of such relationships within the school environment is particularly important. Within this theme, teachers

suggested that when students are made to feel worthwhile, they develop a greater sense of self worth and begin to “look after themselves”. Teachers also saw the importance of having supportive relationships with adults in the school in that students then know that these adults are available to turn to if they ever need their help. In this way, teachers saw positive relationships as being a means of preventing future risk behavior.

It has to be understood that not always do kids have trust in adults and you know, most of them, the ones that have, you know, are really at risk and are engaging in risky behavior often have been let down by those people that should be looking after them. (Female).

There are some that just don't, you know, just don't have value of their lives. The difference is that, if the kid feels like they have a worthwhile life and they're told they're worthwhile, well they look after themselves. (Female).

But I guess the basic thing is the kids need to know that they're valuable people...they need to know the dangers of what risk-taking behavior can be, they need to know there's someone there that when they do this stuff, is going to say, 'I can help you'. (Female).

Participants also suggested that an important means of encouraging students to feel valued and supported was to show that they are interested in them, by talking to them and getting “to know them”. It was suggested that students enjoy teachers' attention and caring about them as individuals, and that if teachers create a caring and respectful relationship, students respond in a way that manifests in increased positive behavior.

You sort of keep an eye on those [high risk] kids, and you might, if you didn't know them that well, you might try and get to know them and talk to them a little bit, and find out what's going on. That sort of stuff. Kids enjoy you as a teacher taking a bit of care, you know. (Male).

I've just tried to develop rapport. Now it works so well with me in a sense that I've done the ground work, I've done the basics so when it comes time to behavior management, if I'm teaching relevant stuff and I have a good rapport and I've got respect with the kids and, and I'm not seen, I'm seen as an authority figure but not someone that's coming down on them and is threatening to them, you know.

It's good, it works well because kids can talk to me about their problems and because I suppose we put in the hard work we don't have any behavior management problems. (Female).

It was also suggested that, when students have a positive relationship with adults in the school, and see them as caring and looking out for them, they may be more likely to think through teachers' suggestions and take their advice on board. One teacher indicated that in such situations, students may consider teachers' opinions and may be less likely to become involved in risk-taking behavior.

Well some teenagers might go 'oh, they really do care', you know 'they're looking out for me', yeah.

That's about the relationship thing, it'd come into it. If you actually have a relationship with them, and they listen and you say 'I don't think you should be doing this' they might, yeah, they might cotton on to the idea and think 'maybe they're on to something there'. (Male).

Successful engagement in school and school activities (behavioral connectedness)

The theme of successful engagement in school fits within the element of behavioral connectedness, which incorporates students' active participation in school and associated extracurricular activities. The teachers participating in this study believed that disengaged or high risk students are often those who have a low sense of self worth, or those who are unable to see themselves as physically participating or being involved in anything valuable. The participants further indicated that the outcome of primary importance was students' experience of positive successes. They saw success through meaningful, positive activities as being able to give these students the sense of self worth and achievement that they may be lacking and often seeking through their risk-taking behavior. Additionally, teachers indicated that such students may feel like they are treated as younger than they believe they are, and are therefore seeking more adult experiences. As such, teachers indicated that by giving students a sense of responsibility and encouraging their involvement in positive activities, the positive successes experienced would lead to improved outcomes for these students.

Everyone should have a little job, to teach that kid to do something, to get something positive out of them ... Most kids disengaged from school are the kids who think they're not worth anything, most of them have a bad life at home and they don't want to, you know, they think they can't do anything. So I think trying to engage them back into something. (Male).

A lot of kids who get disengaged ... they believe they're going to amount to nothing in life. I think if you can show them or prove to them that if you put your head down, you can get something out of life, you know what I mean? And I think that's the main thing. (Male).

I like the idea of kids having responsibility; they often get treated like they're still kids and that's half the problem, whereas they feel all grown up and they certainly are more grown up than we were at that age. So if you can give them sort of adult responsibilities to some extent I think that really helps them. (Female).

Also relating to this theme, participants suggested that students who are given responsibilities within the school are able to develop a greater sense of focus, perhaps toward achieving some future positive success. Teachers also indicated that students enjoy being given responsibilities and being able to take key roles in projects that are meaningful to them. They suggested that students who are allowed major involvement in activities within the school have less time for risk-taking behaviour. It was also suggested that the experience of positive reinforcement for involvement in constructive activities within the school, as well as the students' increased levels of focus on these activities, would encourage reduced involvement in negative behaviors.

A lot of them do respond well to being given responsibilities so, you know, in a school situation, you get some of the kids that are in trouble doing things for you, working with you. They can start kind of small, you know, and then they begin to have maybe some major involvement in some event you're working towards. You know, start off small, but by doing that, if they're given some praise when they're doing the right thing and their time is a bit more free, then perhaps they're a bit less likely to be doing silly things, at-risk behaviors. (Female).

Give them a role. I know that works. Give me a role, and I'll get more focused and stop misbehaving. (Female).

Again within this theme, additional comments indicated that students who are engaged with and involved in more school or school related activities, such as school sports and related training activities, also have less time for risk-taking behavior. Teachers also indicated that they saw an important aspect of their involvement in extracurricular activities

was the supervision that is provided. They indicated that adults' involvement in extracurricular activities, such as sports and training, in a supervisory role enables adults to monitor and actively moderate negative student behavior.

If they're involved in sport that's always a great one because they're doing that and usually a lot of time is involved with the training and stuff and then they make good mates and after the game. They might do some silly things but usually it's a bit more supervised or whatever. (Female).

Feeling of belonging (affective connectedness)

This final theme fits within the broader element of affective connectedness, which relates to the way in which students feel about their position within the school and their relationships with others in the school environment. Discussion within this theme focused on students' sense of "fitting in" and being part of the school community, and the impact that this has on their behavior. Within this theme, students' relationships with both teachers and their peers were discussed, as well as the need to encourage of students' positive engagement within the school. Interestingly, two comments related to students' sense of belonging within the school again in terms of them finding positive successes within that community. Teachers mentioned that positive successes would encourage feelings of value and self worth, much like in the theme of successful engagement, but took this further in that this sense of belonging would encourage avoidance of risk-taking behaviors with which they may have previously found some more negative sense of success. While students may have seen themselves as, for example a "drug user" and felt that this was something that they could successfully be, teachers suggested that experiences of more normative successes may develop students' sense of self and their sense of belonging in a more normative sense, thereby encouraging their continued engagement in more normative and positive activities.

We really need to make sure that everyone has a sense of belonging and finds success in some sort of a way that's positive, because if they can't do it in any positive sense, then they're going to do it in a negative sense. (Female).

Every kid just needs to have a success in school, to feel like they belong. I suppose what we need to do as teachers is find something, a positive success, rather than a negative success so they're feeling important. (Female).

Belonging was also discussed by teachers as being a basic human need. Teachers therefore indicated that students' would seek this sense of belonging from wherever they could find it. As one participant indicated, students may turn to delinquent groups of peers if they are unable to fulfill their need for belonging among more conventional groups. This teacher therefore saw the need to belong as being a primary cause of risk-taking behavior.

Everyone wants a sense of belonging, everyone, and I've found, kids in grade 8 and 9 that didn't really have much confidence, that weren't really fitting in anywhere...they've tended to start hanging out with the bad people because they feel that sense of belonging. (Female).

Discussion

The established link between increased school connectedness and decreased problem behavior has implications for the design of school-based strategies to prevent adolescent risk-taking behavior. Targeting school connectedness as a point of intervention, in conjunction with individual attitude and behavior change programs, may be an effective risk and injury prevention strategy, particularly as teachers do see increased connectedness as an important and positive factor relating to adolescent behavioral outcomes.

In this study, participants discussed a number of the components of school connectedness identified in the literature as being related to adolescent risk behavior. As the literature has shown, school connectedness incorporates several primary elements including affective (e.g., feelings of belonging in school), behavioral (e.g., engagement and involvement), and cognitive (e.g., perceptions of teacher support and fairness) connectedness (Jimerson, Campos and Greif 2003; Libbey 2004; Maddox and Prinz 2003; O'Farrell and Morrison 2003). The participants' comments provide further support for these elements, with interview responses focusing at different stages on each of the three. The themes identified in

analysis of the participant responses included fairness and discipline as well as perceptions of value and teacher support (aligning with cognitive and affective connectedness), successful engagement in school and school activities (behavioral connectedness), and feelings of belonging (affective connectedness). The data suggested that participants viewed students with greater perceptions of school fairness, who perceived a sense of teacher support and of feeling valued and belonging, as well as those who are engaged and involved in school activities, as being less likely to participate in risk-taking behaviors.

A number of explanations for the association between connectedness and student risk behavior were suggested. For example, teachers indicated that supportive and respectful relationships engender trust and a greater likelihood that students' take on board teachers' suggestions. In this way, teachers inferred that students, who feel a sense of belonging in this positive teacher relationship, are more likely to listen to and respect teachers' instructions and opinions, and are less likely to become involved in problem behaviors. A further link between connectedness and reduced risk-taking was that students' positive engagement in school activities leaves them with less time for risk behaviors. Teachers reported that students who are more strongly connected to school take part in more extra-curricular activities and also have a greater level of engagement with school-related activities within the school day, and therefore are not as free to fill their time with risk-taking behaviors. Finally, teachers also indicated that students have an innate need for belonging, and it is this need that may drive students to develop close relationships with risk-taking peer groups. If students are unable to fulfil their need for belonging with prosocial groups of peers, they may seek this closeness with high risk groups. Teachers' understanding of this issue aligns with a large body of previous research, which shows that that having friends who engage in risk-taking is one of the strongest predictors of adolescent risk behavior (Costa et al. 2005).

It is evident therefore that teachers are able to articulate a number of reasons for the association between school connectedness and student risk-taking behavior. Within the literature, however, a number of theories have also been proposed to explain this relationship. One such theory is Social Control theory (Hirschi 1969), which states that connections with people or institutions inhibit risk-taking behavior through four mechanisms, including attachment, commitment, involvement and belief. The participants in this study touched upon Hirschi's first mechanism (attachment) in their suggestions that supportive relationships within the school lead to greater trust and desire for approval from teachers and school staff. They also supported Hirschi's third mechanism (involvement) in their suggestions that positive engagement in school and school activities leads to less available time for delinquent or risky activities. While teachers were able to verbalize a link between the various elements of school connectedness and adolescent behavior and also expressed an understanding of some of the mechanisms behind this link, there is room for greater understanding, particularly of the variety of ways in which connectedness to school may influence student behavior, as raised by Hirschi in Social Control theory. Therefore, although teachers do express an understanding of the nature of school connectedness and its impact on student behavior, there is the opportunity to further develop this knowledge within teacher training programs, which may form an important part of student risk and injury prevention interventions.

Programs that aim to increase students' connectedness to school (e.g. RAP-T; Shochet and Wurfl 2006; Seattle Social Development Project; Hawkins et al. 2001) commonly use teacher professional development as an intervention strategy. Teachers are considered to be a key point of change within the school, in that they may encourage increased connectedness through their classroom management and discipline strategies and their relationships with and engagement of students. To date, however, programs have been developed without documented research exploring teachers' perceptions of connectedness and its relationship

with student behavior. Research has shown that school-based prevention programs are more likely to be effective if teachers feel a sense of ownership for the program (Fagan and Mihalic 2003), and therefore consultation with teachers to ensure program development incorporates their views and aligns with their priorities is an important process. Previous qualitative research in education has examined teachers' perceptions of, for example, issues such as inclusive education practices (e.g. McKleskey & Waldron, 2002; Smith & Smith, 2000) and educating students with specific needs, for example, those with Attention Deficit/Hyperactivity Disorders (e.g. Bos, Nahmias & Urban, 1997). Gaining teachers' perspectives in such issues has proven important for the development of appropriate teacher training programs (Bos, et al., 1997; Smith & Smith, 2000), and demonstrates the importance of the current research for the development of teacher training in connectedness.

This research indicates that the teacher participants perceived connectedness to be an important factor that impacts on adolescent outcomes. Additionally, the findings from this study provide a rich source of information for program development. For example, teachers' comments relating to school connectedness in the context of risk-taking behavior provide ecologically valid material for interventions that aim to meet risk-taking and injury prevention goals. The use of teachers' own responses in program development would increase the face validity of training content, and implementation of program strategies is also enhanced when trainees see the program content as being logical (Fagan & Mihalic, 2003). The current research provides a rich source of strategies that teachers currently use, and that may be further encouraged and shared in training, to improve students' connectedness to school.

For example, within the theme of fairness and discipline, the participants indicated that connectedness may be developed when teachers are consistent in their disciplinary practices, and when they develop and maintain positive, trusting relationships, particularly

with students who are displaying problem behavior. A further means of increasing connectedness, as discussed within the theme of feeling valued and teacher support, was described as fostering supportive relationships with students that encourage their feelings of self-worth, through showing an interest in them and getting to know them as an individual. Teachers also discussed the importance of being available for students to talk to, for both encouraging connectedness and preventing engagement in risk-taking behavior.

Within the theme of successful engagement, teachers indicated that connectedness may be developed through encouraging students' engagement with positive school-related activities that foster a sense of responsibility and experience of positive success. Finally, within the theme of belonging, teachers also expressed the importance of enhancing positive engagement, and of developing students' sense of "fitting in", particularly with normative peers and in positive, pro-social activities. In summary, this research provides teachers' own suggestions as to ways in which they are able to promote connectedness and impact on their students' risk-taking behavior. These findings have important implications for the design of professional development, and suggest specific content areas that should be included in training programs.

This research has several limitations, including the participation of teachers from only two public high schools. The fact that staff from just two Australian schools were interviewed may mean that findings may not reflect the perceptions of a broader range of teachers, such as those from other geographical locations or types of schools, including religious institute schools or elementary or middle schools. Additionally, teachers were all sampled from the Health and Physical Education department (aside from one School-based youth health nurse and one Guidance Officer), again limiting the applicability of findings to other groups. However, the purposive sampling of this particular group of school staff (i.e. those who are likely to deliver health behavior change programs) enabled detailed findings to emerge that

may be applicable to the design of professional development in connectedness that specifically targets those likely to deliver health behavior change programs within schools.

Future research may however examine the perceptions of other school staff to determine the degree to which these results generalize throughout the wider teacher population.

This research has important implications for the development of school-based risk and injury prevention programs. As school connectedness has been shown to be a critical protective factor for adolescent risk behavior and associated injury, it is important to target this factor in prevention programs along with individual attitude and behavior change strategies. Teacher training in the importance of connectedness and strategies to enhance students' connectedness may be an important means of targeting the school social context in such interventions, however to date teachers' perceptions of this issue had not been reported. This research showed that teachers perceive students' connectedness as an important factor, and one that is associated with students' problem behavior. These findings, along with the substantial body of research from student surveys on connectedness, enable the development of school-based risk and injury prevention programs that are based on both student and teacher-focused research.

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